

Progress in Poultry Inspection And Sanitation

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THE UNPRECEDENTED expansion of the poultry processing industry in recent years is directly associated with significant changes in processing, storing, packaging, and sales methods, which are in considerable contrast to the days when most market poultry was incidental to the production of eggs. The changes in methods of processing poultry have brought to light many sanitation problems heretofore associated only with large-scale food processing operations.

Government control of food production and distribution is not a new concept. Since medieval times the increasing complexities of our civilization have demanded intensification of vigilance over the food industry. This is not merely for the sake of regulation, but principally because the age-old concept of caveat emptor—let the purchaser beware—no longer seems to apply. One author stated that “it has been discarded as being without justification in the

uneven balance existing between manufacturer and consumer” (1).

Although poultry and poultry products are nutritious and appetizing when wholesome and properly processed, like any other food they can transmit disease to man when they are contaminated with pathogenic organisms. Poultry meat which is derived from diseased birds or which becomes contaminated with harmful organisms during processing or subsequent handling is a hazard to human health.

Epidemiologists are aware that poultry constitutes an important animal reservoir of disease organisms affecting man. Such diseases may be transmitted to him through direct contact with birds on the farm, during the processing procedure, or through the consumption of poultry or poultry products. In addition, the large number of foodborne disease outbreaks which are not due to the food products themselves but to their contamination by careless food handling and by service personnel must not be disregarded.

Poultry processing plants may be located hundreds or thousands of miles from points of consumption. Poultry and poultry products are handled by numerous workers and often remain in storage for extended periods of time. It is difficult for the consumer in one part of the country to determine through his regulatory agency the fitness of birds that have been processed in a distant section.

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Inspection and Sanitation

In a poultry hygiene program two facts must be kept in mind. First, poultry is a food product that must be carefully processed and handled to be safe for human consumption and, second, in lieu of surveillance by individuals, public service agencies have been designated to protect the interests of consumers.

On the Federal level, the United States Department of Agriculture conducts a two-phase voluntary program, involving inspection and sanitation. Approximately 15 to 20 percent of processed poultry is covered by its provisions. The Food and Drug Administration of the Department of Health, Education, and Welfare helps to assure the wholesomeness of poultry which is shipped in interstate commerce. This is accomplished through the inspection of the establishments where these produces are processed and by the examination and condemnation of lots of poultry which are known or suspected to be adulterated or otherwise unfit for human consumption.

However, a large proportion of poultry is consumed in the same locality of a State in which it is originally processed. Probably less than 30 percent of the poultry processing in this country is supervised by programs of the United States Department of Agriculture and the Food and Drug Administration, and only rough estimates are available as to how much of the remaining 70 percent is supervised by State and local regulatory officials. Unfortunately, processing of the majority of this poultry does not receive any, or only cursory, supervision.

To improve some of these situations, various ordinances and regulations have been adopted by States and communities. Some are adequate and well formulated; others are based primarily or partially on revenue raising factors. Trade barriers flourish under the latter type of ordinance, the strength of which is dependent upon minor differences between it and the regulations that exist elsewhere. Sincere and honest public officials do not support any measure which is in restraint of trade, and which may eventually affect the health and nutrition of the people.

The trade-barrier type of ordinance was dealt with severely by the United States Supreme

Court in 1951 in its decision in the case of the *Dean Milk Company v. The City of Madison, Wis.* According to provisions of a municipal ordinance it was unlawful to sell any milk within the municipality as pasteurized milk unless it had been processed and bottled in an approved pasteurizing plant within a radius of 5 miles from the central city square. The court held that these provisions were discriminatory and that a municipality cannot curtail interstate commerce—even in the exercise of its unquestioned power to take appropriate measures to protect the health and safety of its people—when reasonable, nondiscriminatory alternatives, adequate to conserve legitimate local health interests are available (2). The alternatives suggested by the court were: (a) inspection by municipal officials of distant milk sources, for which the receiving municipality could charge the actual and reasonable cost of such inspection to the shipping producers and processors, and (b) adoption of the provisions of the Milk Ordinance and Code recommended by the Public Health Service, which imposes no geographic limitation on location of milk sources and processing, but excludes from the municipality milk not produced and pasteurized in conformance with standards as high as those enforced by the receiving city. If the same principle is applied to regulations for marketing poultry, the courts will be justified in holding as invalid any ordinance or set of regulations that will prevent the free movement of other wholesome foods in interstate and intrastate commerce.

Need for Standard Ordinance

Health officials believe that a standard model ordinance covering poultry inspection and sanitation is needed, similar in scope to the Public Health Service's recommended ordinances and codes regulating milk and eating and drinking establishments. On a number of occasions, the conference of the Surgeon General of the Public Health Service with the State and Territorial health officers has indicated concern over the inability of our present programs to protect adequately the consumer of poultry and poultry products. At its meeting in Washington, D. C., in December 1952, it was recom-

mended "that the States strengthen their State and local programs for controlling the hazards associated with the processing of poultry, including, but not limited to, such items as inspection for wholesomeness and sanitation in storage, transportation, and retail sales; and that the Public Health Service continue to apprise the State and Territorial enforcement agencies concerning progressive codes for conducting effective poultry inspection programs" (3). In October 1952, prior to the issuance of that resolution, the United States Livestock Sanitary Association, through its Committee on Meat and Milk Hygiene, stated: "Your Committee recommends the setting up of local administration and enforcement of poultry sanitation and poultry inspection. Model ordinances for both poultry sanitation and poultry inspection should be formulated" (4). Elsewhere in the proceedings, it was emphasized that nothing can be found in the methods or economics of the poultry industry that would not adapt itself to the presently accepted methods for controlling milk production. The report went on to say: "To assure widespread uniformity and acceptance of the product, a system of public health scoring by areas should also be established."

Proposed Poultry Ordinance

Early in 1952, in anticipation of needs in this area of public health, the Public Health Service formulated plans for the conduct of a poultry hygiene program. Later that year, leaders of the poultry industry, realizing the apparent need for uniform standards, offered to assist the Service in developing the first part of a two-part model poultry ordinance. This portion, devoted to sanitation, will serve as the basis for relieving existing inadequacies in the processing and handling of poultry and poultry products. Shortly thereafter, a public health liaison committee was established to review the progress made in the development of the ordinance and to offer suggestions for its improvement. This portion, part I, entitled "Sanitation" was released to health jurisdictions, to professional veterinary associations, and to the industry, for review and comment. The final draft has now been prepared, includ-

ing many of the comments received in response to the request of the Public Health Service. It is scheduled for publication early this year.

The detailed sanitation requirements contained in the ordinance are those which cannot be compromised from a public health standpoint. They are essentials that can be complied with by large and small operators without hardship to either group.

Buildings must be conducive to sanitary maintenance; rodents and insects must be built out. Products cannot be contaminated by improperly collected refuse, by equipment which is not constructed, located, operated, and maintained properly, or by employees who do not have proper facilities for washing their hands thoroughly at lavatories properly provided with soap and sanitary towels. The importance of prompt chilling and refrigerating facilities is emphasized. These are but a few of the provisions that will guide the plant operator to more effective operation.

The Public Health Service believes strongly that a poultry regulatory program is not complete without provision for antemortem and postmortem inspection of poultry for wholesomeness by competent personnel. Therefore, part II, entitled "Ante-Mortem and Post-Mortem Inspection" is being prepared to complete the two-part document. This portion will be released after thorough review by experts in poultry hygiene outside of the Public Health Service.

Many questions remain unanswered with respect to the successful application of inspection procedures on the local or State level. This fact alone, however, should not prevent jurisdictions from embarking on programs of this type as soon as competent personnel and sufficient funds are available. Among the obstacles currently recognized are the shortage of professional personnel, the current unmet need for training facilities to be used for training lay inspectors, and the generally inadequate salary scale for activities of this type.

Regulatory officials must not fail to recognize that improperly enforced food control regulations provide a false sense of security to consumers and, in general, foster lack of respect for the programs which they conduct.

Because sanitation is a basic necessity in the

processing and handling of perishable foods such as poultry, part I—Sanitation, alone, may be adopted. Those jurisdictions which are able to provide the necessary funds and trained personnel to conduct antemortem and postmortem inspections may adopt both part I and part II. However, the ordinance is so worded that part II should never be adopted alone, but rather in conjunction with part I. Each part is further divided into an adoption-by-reference form and a complete form.

Since cost is a major factor, the adoption-by-reference form, being more convenient and less costly, is suggested for local adoption in areas where the adoption of ordinances by reference to published standards is considered legal.

The administrative reasons for the release of part I of the ordinance in advance of part II are:

1. Sanitation of poultry processing plants is basic to a poultry hygiene program and a prerequisite to effective poultry inspection. Providing part I of the ordinance to regulatory officials at an advance date will give them an opportunity to solve an immediate and pressing problem.

2. The time interval between the issuance of the two parts will provide public health and veterinary regulatory officials with an opportunity to study some of the complexities associated with carrying out antemortem and postmortem inspection in States and municipalities.

The poultry industry is aware that there are certain deficiencies in its operations, and it has made efforts to improve plant sanitation. The Institute of American Poultry Industries, a member organization of Associated Poultry and Egg Industries, has sponsored several schools for sanitation management and has prepared a manual which will be of assistance to progressive members of the industry. Also, the United States Department of Agriculture has, during the past 2 years, scheduled many sanitation institutes, on a sectional basis, throughout the United States. These have resulted in a renewed interest by poultry raisers in improving and maintaining plant sanitation.

There has been in the past, and will continue to be in the future, much discussion regarding the most feasible method for conducting poultry inspection. In an address to the 1950 Con-

vention of the American Veterinary Medical Association, Brigadier General W. O. Kester, Assistant for Veterinary Services, United States Air Force (5), outlined four points which are, generally speaking, the cardinal principles of inspection:

“An inspection agency, to be acceptable, must comply with the four cardinal prerequisites for an adequate inspection service. First, the inspectors must be competent and qualified. Second, they must have tenure of office, so that no one may put pressure on them in connection with their duties. Third, the inspectors’ agency or supervisors must be responsible and accountable to the consumer. Fourth, the inspectors must have no financial interest or connection with anyone in the organization being inspected.”

Qualifications of Inspectors

The qualifications for lay inspectors and their relationship to professional veterinary personnel have been discussed repeatedly during recent years. The proposed poultry ordinance does not attempt to set standards covering relative qualifications for employment. On matters such as this, the Public Health Service will be guided by the judgment of the organized associations of the veterinary profession and by outstanding public health authorities. At the moment, the policy statement of the American Veterinary Medical Association relative to the use of lay inspectors is basically sound. It states that lay persons should be authorized to sort the abnormal from the normal; the latter to be passed without restriction; the former to be left to the judgment of the veterinary inspector. No particular educational level is necessary, although common sense and good judgment are essential. Well organized, on-the-job training will be encouraged.

This policy is consistent with the belief of most veterinary public health authorities that many of the individual points of the inspection process can be undertaken by persons of limited training. To employ veterinarians on routine tasks, which can be performed ably by technical personnel of lesser qualifications, would be inconsistent with the concept that professional personnel should be utilized to the

maximum. The work of inspection must be downgraded so it can be performed by less highly trained personnel, while supervisory work should be reserved for the special knowledge and training of the veterinarian.

Through the adoption and enforcement of the proposed poultry ordinance by cities and States, consumers' health officers may assure themselves of an adequate level of sanitation in poultry processing plants and of safe, wholesome poultry and poultry products. Through its provisions they may authorize for sale in that community poultry and poultry products which are processed in other jurisdictions operating under this ordinance or its equivalent. The widespread adoption of this ordinance should provide a basis for the free interstate and intrastate movement of wholesome poultry and poultry products. It should provide standards of sanitation in poultry processing, storage, and sales, and inspection at a level consistent with public health requirements.

REFERENCES

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- (2) Stein, M., and Sonenshein, I. L.: Recent court decisions on municipal milk inspection. *Pub. Health Rep.* 66: 898-902 (1951).
- (3) Association of State and Territorial Health Officers. Environmental Sanitation Committee: Recommendations. *In Proc.*, 51st annual conference of the Surgeon General of the Public Health Service and the Chief, Children's Bureau, with State and Territorial Health Officers . . . Public Health Service Publication No. 307. Washington, D. C., U. S. Government Printing Office, 1952, pp. 64-65.
- (4) U. S. Livestock Sanitary Association. Committee on Meat and Milk Hygiene: Report. *In Proc.*, 56th annual meeting, U. S. Livestock Sanitary Association. Louisville, Ky., The Association, 1952, p. 250.
- (5) Kester, W. O.: United States Air Force Veterinary Service. *In Proc.*, 87th annual meeting, American Veterinary Medical Association. Chicago, The Association, 1950, pp. 282-290.

Dermatitis From Cadmium Plating

Dermatitis from cadmium plating is a well-known phenomenon. The dermatitis arising from this operation can be produced by any one of several substances used in the plating operation. In the first place, the metal, before plating, is often degreased with an organic solvent such as naphtha or gasoline and then scrubbed with sodium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, or trisodium phosphate. The articles may then be pickled in strong acid solution, and even a bichromate solution may be added to the pickle. All of the above-named substances are dermatitis-producing agents by either their degreasing action or caustic properties. The cadmium

plating solution usually consists of cadmium or cadmium oxide, sodium cyanide, and sodium hydroxide. Sodium cyanide spray often causes dermatitis, mucous membrane irritation, and ulceration. Of course, the sodium hydroxide also may cause dermatitis and ulcers. It has been reported that when the skin comes in contact with the plating solution, it often turns black.

In addition to engineering devices for protection against systemic cadmium poisoning it is recommended that cadmium-plating workers use rubber gloves, impervious sleeves, and aprons to avoid skin contact with the solutions and petrolatum in the nostrils to lessen nasal mucous membrane irritation.